Stantec Analytical Validation Checklist — Report No. ASZ55

Project Name: Amtrak North Yard	Project Number: 213402048
Validator: Jim Tezak	Laboratory: Eurofins/Lancaster Laboratory
Date Validated: 9/26/2018	Laboratory Project Number: 1519124
Sample Start-End Date: 11/13/2014	Laboratory Report Date: 12/22/2014

Parameters Validated:

Polychlorinated biphenyls (PCBs) by EPA SW-846 3546/8082A - solid matrix

Percent Solids by SM 2540 G

Samples Validated:

IW-Lateral, LLI # 7678567 (Grab Soil)

VALIDATION CRITERIA CHECK

Validation Flags Applicable to this Review:

U The analyte was analyzed for, but not detected above the reported sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ Result is estimated quantity but the result may be biased high.

J- Result is estimated quantity but the result may be biased low.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

B The analyte was detected in the method, field, and/or trip blank.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

	Yes	No
1. Were all the analyses requested for the samples submitted with each COC completed by the lab?	**X**	

Comments:

	Yes	No
2. Did the laboratory identify any non-conformances related to the analytical result?	**X**	

Comments:

The laboratory summarized samples with out-of-control surrogate spike recoveries in the case narrative. Specific samples are discussed in this DUSR under item 10, below.

	Yes	No
3. Were sample Chain-of-Custody forms complete?	**X**	

Comments:

	Yes	No
4. Were samples received in good condition and at the appropriate temperature?	**X**	

Comments:

The laboratory noted on the Sample Administration Receipt Documentation Log that there was no custody seal present when the samples were received.

5. Were sample holding times met?		Yes **X**	No
Comments:			
6. Were correct concentration units reported?		Yes **X**	No
Comments: Results for all soil samples were reported in units of micrograms per kilogram (ug/kg).			
7. Were detections found in laboratory blank samples?		Yes	No **X**
Comments:			
8. Were detections found in field blank, equipment rinse blank, and/or trip blank samples?	NA **X**	Yes	No
Comments: No field blanks were submitted in this sample delivery group (SDG).			
9. Were instrument calibrations within method criteria?	NA **X**	Yes	No
Comments: Not Applicable, Level 2 data validation.			
10. Were surrogate recoveries within control limits?		Yes	No **X**
Comments: High recovery was reported for the surrogate decachlorobiphenyl (DCB) in the sample IW-Lateral (219%). This recovery was the result of high sample dilution (dilution factor=200X); therefore, no corrective action was required. No data were qualified since the surrogates were diluted out.			
11. Were laboratory control sample(s) (LCS/LCSD) sample recoveries within control limits?		Yes **X**	No
Comments:			
12. Were matrix spike (MS/MSD) recoveries within control limits?	NA **X**	Yes	No
Comments: Not applicable; site-specific MS/MSD not analyzed for this SDG.			
13. Were RPDs within control limits?		Yes **X**	No
Comments: Not applicable; site-specific MS/MSD not analyzed for this SDG.			
14. Were dilutions required on any samples?		Yes **X**	No
Comments: This sample required a 200X dilution prior to analysis. Sample reporting limits were adjusted accordingly. No data were qualified.			

15. Were Tentatively Identified Compounds (TIC) present?	NA **X**	Yes	No
Comments: TIC not requested.			
16. Were organic system performance criteria met?	NA **X**	Yes	No
Comments: Not Applicable, Level II data validation.			
17. Were GC/MS internal standards within method criteria?	NA **X**	Yes	No
Comments: Not Applicable, Level II data validation.			
18. Were inorganic system performance criteria met?	NA	Yes **X**	No
Comments:			
19. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results. **Duplicate Sample ID** **Primary Sample No.**		Yes	No **X**
Comments: No blind field duplicates were submitted with this SDG. The lack of a field duplicate did not affect data quality, usability, or completeness. Completeness with regard to collection of the required number of field duplicates will be assessed on an overall program-wide basis.			
20. Were at least 10 percent of the hard copy results compared to the Electronic Data Deliverable Results?	Yes **X**	No	Initials KEF
Comments:			
21. Other?		Yes	No **X**
Comments: All samples were validated according to the USEPA 2014 NFGs and DNREC SOPCAP. All data are considered usable as qualified. No data have been rejected.			

PRECISION, ACCURACY, METHOD COMPLIANCE AND COMPLETENESS ASSESSMENT

Precision:	Acceptable X	Unacceptable	Initials JET
Comments:			
Sensitivity:	Acceptable X	Unacceptable	Initials JET
Comments:			
Accuracy:	Acceptable X	Unacceptable	Initials JET
Comments:			

Representativeness:	Acceptable X	Unacceptable	Initials JET
Comments:			
Method Compliance:	Acceptable X	Unacceptable	Initials JET
Comments:			
Completeness:	Acceptable X	Unacceptable	Initials JET
Comments:			